



The Appalachian Laboratory Graduate Student Handbook



2009-2010



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Introduction

The purpose of this document is to provide a helpful resource for students and faculty for information pertinent to academic, research, and social activities of the Appalachian Laboratory (AL). Some of the information contained in this document is available from a number of alternative sources, particularly the MEES, AL, and College Park websites, but it has been combined here to make life easier for the members of the AL community. The hope is that this handbook will help new students and employees adjust to life at the Appalachian Laboratory and will help returning students and faculty through the many policies and procedures of AL and our associated campuses.



Important Websites

www.al.umces.edu

www.mees.umd.edu/index.htm

www.frostburg.edu

www.usmd.edu/Institutions/acadcalendar.html

The Center for Environmental Science

The Appalachian Laboratory is one of three research units of the University of Maryland Center for Environmental Science (UMCES). UMCES is one of 13 institutions of the University System of Maryland. The Appalachian Laboratory is located in Frostburg, Maryland adjacent to the Frostburg State University campus. AL faculty and students conduct research on diverse ecosystems within the Chesapeake Bay region and many other parts of the world. The Horn Point Laboratory is located in Cambridge Maryland on the 850-acre former estate of Francis V. duPont on Maryland's Eastern Shore. The Chesapeake Biological Laboratory at Solomons, Maryland, is located at the mouth of the Patuxent River, in the town of Solomons, MD, on the western shore of Chesapeake Bay. Founded in 1925 by Dr. Reginald V. Truitt, CBL is one of the oldest marine laboratories on the east coast. The Chesapeake Biological laboratory is the home port of UMCES research vessels. Collectively these laboratories provide the opportunity for study from land to the sea.

UMCES is also responsible for the administration of the [Maryland Sea Grant College](#) program. These offices are located on the University of Maryland College Park Campus. Focused on making the United States the world leader in marine research and sustainable development of marine resources, MDSG is one of 30 State Sea Grant programs at over 200 universities and is housed at the University System of Maryland College Park campus. Maryland Sea Grant began as a program in 1977, obtained Sea Grant College status in 1982 and came under the UMCES' guidance in 1999.

Lastly, UMCES maintains a small suite of offices near the State House in Annapolis MD.



Highlights of some of the University of Maryland System campuses

All of the University System campuses have much to offer students and the broader AL community. Some of the campuses with which AL and/or the MEES program frequently interact include:



Situated in the mountains of Allegany County, **Frostburg State University (FSU)** is Western Maryland's regional university. The only four-year USM institution west of the Baltimore-Washington area, FSU also serves as the region's premier educational and cultural center. Strong programs in liberal arts, business, computer science, physical education, and environmental studies draw students from around the world at both the undergraduate and graduate levels. A low student-faculty ratio permits close personal attention and a learner-centered environment.



University of Maryland College Park (UMCP) is the largest of the University's campuses and offers comprehensive programs in the arts, sciences, agriculture, engineering, and education at both the undergraduate and graduate levels. The campus, a land grant institution, is counted among the major research universities in the United States with support from federal, state, and private sources for its research activities. The location of the campus immediately adjacent to Washington, DC makes available to students the cultural and intellectual resources of the nation's capital.



University of Maryland Eastern Shore (UMES) is an 1890 Land Grant institution located in Princess Anne, MD. UMES is unique in its location midway between the Chesapeake Bay and the Atlantic Ocean and has an undergraduate effort in marine, estuarine and environmental sciences.

University of Maryland Baltimore (UMB) is located in downtown Baltimore. The University's campus is one of the country's first centers for professional education. The founding of the School of Medicine in 1807 provided the nucleus for the campus, which expanded in 1840 to include the Baltimore College of Dental Surgery. Sharing the campus with these two schools today are the Schools of Law, Nursing, Pharmacy, Social Work, and Community Planning; an inter-professional Graduate School; and the University of Maryland Medical System.

University of Maryland Baltimore County (UMBC) is located southwest of downtown Baltimore. It is a relatively recent campus, having been established in 1966. Departments that are noteworthy at UMBC include biological sciences, chemistry, and the fine arts. UMBC has a suburban setting, but is strategically located in the Northeast corridor. Baltimore, Washington, and College Park are all less than an hour away.



The Center of Marine Biotechnology of the University of Maryland Biotechnology Institute, located in downtown Baltimore, is dedicated to research and education in marine molecular biology and molecular genetics. The research and training programs carried out are interdisciplinary and

interactive, based on applied and basic research, with service to industry, government, and other institutions.



Salisbury University (SU) is a dynamic academic community serving Maryland's Eastern Shore, Salisbury University offers 30 undergraduate majors. Master's programs include English, Psychology, Education, Nursing, Business, and History. Salisbury has four endowed schools, a rarity among public institutions: the Perdue School of Business, the Henson School of Science and Technology, the Seidel School of Education and Professional Studies and the Fulton School of Liberal Arts. Nationally cited as a "best value", SU offers an honors program for its top scholars and individual attention to all students.

The Marine Estuarine and Environmental Sciences Program

Directions to the MEES Program Office

0105 Cole Field House, University of Maryland College Park

From East/South:

Rte. 95/495 Capitol Beltway north

Exit 23 - Kenilworth Avenue (Rte. 201) south (exit says University of Maryland)

Left at end of ramp onto Kenilworth Avenue

Continue south on Kenilworth to Paint Branch Parkway (3rd full stop light)

Take right onto Paint Branch Parkway

Continue straight to UMCP campus (stop light at intersection of Rte. 1). You will want to be in the second or third lanes (of 5 lanes) at the stop light.

After going straight through the light onto campus, continue straight up along Campus Drive.

You will approach the circle with the giant "M"; go through the circle and continue straight up the hill. Pass the Stamp Student Union. When you reach the split in the road, bear right. Cole Field House is on the right.

From North:

Rte. 95 south towards Washington

Exit 27/25 to Rte. 1 (Baltimore Blvd.) south to College Park

Continue south on Rte. 1 for approximately 2 miles

Turn right onto UMCP campus at Campus Drive

Continue straight up along Campus Drive. You will approach the circle with the giant "M"; go through the circle and continue straight up the hill. Pass the Stamp Student Union. When you reach the split in the road, bear right. Cole Field House is on the right.

From West/Northwest:

Rte. 495 Capitol Beltway east

Exit 25 to Rte. 1 (Baltimore Blvd.) south to College Park.

Continue south on Rte. 1 for approximately 2 miles

Turn right onto UMCP campus at Campus Drive

Continue straight up along Campus Drive. You will approach the circle with the giant "M"; go through the circle and continue straight up the hill. Pass the Stamp Student Union. When you reach the split in the road, bear right. Cole Field House is on the right.

Program Overview

The Marine-Estuarine-Environmental Sciences (MEES) Program is a cross-campus graduate program leading to M.S. and Ph.D. degrees. Although some students matriculate through other programs, almost all students at Horn Point are enrolled through MEES. The mission of the MEES Program is to train graduate students in the environmental sciences.

The title of the program emphasizes our strengths in marine and estuarine sciences, although the program spans environmental science as a whole, irrespective of habitat. The interests of students in the program are diverse, but generally center on some aspect of the interaction between biological and physical or chemical systems. The analysis of this interaction may be anything from a study of molecular mechanisms to an assessment of the economics of an environmental impact. To ensure that all students in the program have some understanding of the breadth of information in the field of environmental sciences, each student is required to have course work in a variety of areas.

The MEES Program is interdisciplinary; its faculty consists of members from numerous units within the University System of Maryland. In most cases, students within the MEES Program work in the laboratory of their research advisor in the department or unit to which the advisor belongs.

Courses taken by MEES students are taught on all campuses of USM and at the research laboratories. A course taught anywhere within USM is available to any graduate student registered at any campus through intercampus enrollment. Many courses are taught on interactive video, making them available to students without traveling.

Areas of Specialization

The interests of faculty and students within the MEES Program have led to six formally defined Areas of Specialization (AOS), from which a student may choose. These are: Ecology, Environmental Chemistry, Environmental Molecular Biology and Biotechnology, Environmental Science, Fisheries Science, and Oceanography. Each student will choose an AOS when applying, and both admission and program requirements will depend on the AOS and the student's background and interests.

Ecology

The MEES Program provides access to a strong curriculum of interdisciplinary graduate training and research in ecology. Ecology is a broad discipline encompassing both terrestrial and aquatic environments. Specific areas of study include behavioral, community, evolutionary, marine, benthic, limnological, systematic, and physiological ecology. Variations and/or combinations of one or more of these subdisciplines are common (e.g., marine benthic community ecology as one area of study or the evolution of terrestrial communities as another). Students successfully completing this Area of Specialization could go on to academic appointments in a variety of departments (e.g., Environmental Sciences, Ecology, Biology, Zoology, Botany, etc.), or work

for environmental consulting companies, as well as federal or state government agencies.

Environmental Chemistry

The objective of the Environmental Chemistry Area of Specialization (AOS) is to train research scientists to apply basic chemical principles to the study of the environmental behaviors of natural and anthropogenic chemicals. Environmental chemistry includes interdisciplinary studies of various realms such as geochemistry, transport processes, and toxicology to determine the fate and effects of chemicals in the natural environment. Students graduating from MEES through this AOS will find professional positions in Federal, state, and local government agencies (such as EPA, FDA, NIH), private chemical and manufacturing industries, academic institutions, and consulting firms.

Environmental Molecular Biology/Biotechnology

Molecular approaches pervade every biological discipline. Expertise within MEES includes molecular endocrinology of fish growth, development and reproduction; methods of drug delivery; environmental stressors contributing to fish physiological dysfunction and oncogenesis; mechanisms and stressors of nitrogen fixation; molecular models of marine surface colonization; molecular cues of organism-organism interaction; and invertebrate immunity. Faculty in this area frequently study macromolecular-environmental interactions using recombinant DNA and hybrid approaches. The Environmental Molecular Biology and Biotechnology Area of Specialization encourages interaction between campuses and is synergistic with other AOSs.

Environmental Science

This Area of Specialization provides broad training in the environmental sciences. It is offered for students who do not want to specialize to the extent the other Areas of Specialization require, but would like to gain experience and take courses in a variety of scientific, economic, and social disciplines related to the natural environment. These requirements are also very appropriate for students wishing to specialize in environmental management.

Fisheries Science

Fisheries Science is multidisciplinary, drawing expertise from the biological, physical, and social sciences. Fisheries scientists study populations and communities of aquatic resources, their responses to exploitation, and changes in environmental conditions, and their management. Research is quantitative and may be either basic or applied. The multidisciplinary nature of fisheries science requires broad training in areas that may include ecology, oceanography, aquaculture, economics, mathematics, seafood technology, pathology and diseases, and management science. Most career opportunities in fisheries science are in the government and academic sectors, although in recent years, private businesses, research firms and aquaculture businesses offer increasingly diverse career choices. Course work and research undertaken by MEES students emphasize three fields of study: Fisheries Ecology, Fisheries Management, and Fisheries Aquaculture.

Oceanography

In the past decade, the University System of Maryland has emerged as a nationally and internationally recognized center for oceanographic research. The Horn Point Laboratory (HPL) and the Chesapeake Biological Laboratory (CBL) of the University of Maryland Center for Environmental Studies (CES), and the Meteorology Department at the University of Maryland, College Park (UMCP) are most active in this field, with the research of at least 25 faculty focusing on oceanography.

Students in this AOS have access to extensive oceanographic facilities throughout the USM as well as the opportunity to work with some of the University's outstanding faculty in oceanography. Fundamental courses in the four major sub-fields of oceanography are required to provide interdisciplinary breadth, but a degree in the Oceanography AOS emphasizes the student's independent research. Students graduating from the Oceanography AOS can expect to find jobs in universities, oceanographic laboratories, government agencies, and consulting firms.

Graduate Student Milestones

Admission and Prerequisites

Applicants will be considered for admission and advising on all campuses by faculty associated with an appropriate Area of Specialization, based on the applicant's requests. Prospective students may apply through either the Graduate School at the University of Maryland Baltimore County (for UMBC and UMAB), the Graduate School at College Park, or the Graduate School at the University of Maryland Eastern Shore. In general, a student who has identified a specific member of the faculty with whom to work should apply to the campus where that faculty member is affiliated.

Students who are admitted will be advised whether they have any courses that must be completed to fulfill the prerequisites of the MEES program. All prerequisite courses must be completed within a student's first year after admission. Extensions can be granted by the MEES Director if a course is not available to the student in the first year.

PREREQUISITES FOR ADMISSION TO EACH AOS

<p>ECOLOGY A Bachelor's degree in the natural or life sciences (i.e., equivalent to UM undergraduate Biology degree):</p> <ol style="list-style-type: none"> 1. Two semesters of Calculus 2. Two semesters of Introductory Chemistry 3. Two semesters of Organic Chemistry or Biochemistry 4. Two semesters of Physics 5. Two semesters of Introductory Biology (or high placement test, high GRE Biology scores) 6. One Ecology course and two other Advanced Biology courses 	<p>ENVIRONMENTAL CHEMISTRY A Bachelor's degree in the natural sciences or engineering, including:</p> <ol style="list-style-type: none"> 1. Two semesters of Calculus 2. Two semesters of Physics 3. Two semesters of General Chemistry 4. Two semesters of Biology 5. Two semesters of Organic or other Advanced Chemistry (e.g., Biochemistry)
<p>ENVIRONMENTAL MOLECULAR BIOLOGY/BIOTECHNOLOGY A Bachelor's degree in the natural sciences, life sciences, or engineering including:</p> <ol style="list-style-type: none"> 1. Four semesters of Biology, including Biochemistry 2. Two semesters of Physics 3. Four semesters of Chemistry 4. Two semesters of Calculus 5. Two semesters of Molecular Biology/Molecular Genetics 	<p>ENVIRONMENTAL SCIENCE An undergraduate degree in the natural sciences or engineering including:</p> <ol style="list-style-type: none"> 1. Two semesters of Calculus 2. Two semesters of Introductory Chemistry 3. Two semesters of Physics 4. Two semesters of Introductory Biology (or high placement test, high GRE Biology scores) 5. An Ecology course and other advanced Environmental Science courses are recommended
<p>FISHERIES SCIENCE A Bachelor's degree in the natural sciences or other field with a strong quantitative emphasis, including</p> <ol style="list-style-type: none"> 1. Two semesters of Calculus 2. Two semesters of Introductory Chemistry 3. Two semesters of Organic Chemistry, Biochemistry, or Physics 4. Two semesters of Introductory Biology (or high placement test, high GRE Biology scores) 5. Advanced Biology courses, such as Ecology and Ichthyology, are recommended 	<p>OCEANOGRAPHY <i>Biological Oceanography:</i> A Bachelor's degree in the natural or life sciences (i.e., equivalent to UM undergraduate Biology degree), including:</p> <ol style="list-style-type: none"> 1. Two semesters of Calculus 2. Two semesters of Introductory Chemistry 3. Two semesters of Organic Chemistry or Biochemistry 4. Two semesters of Physics 5. Two semesters of Introductory Biology <p><i>Physical Oceanography:</i> A Bachelor's degree in a physical science, including:</p> <ol style="list-style-type: none"> 1. Two semesters of Calculus 2. Two semesters of Physics 3. One or two additional advanced math courses 4. One or two additional advanced physical sciences courses 5. Two semesters of Introductory Biology and/or Chemistry are highly recommended

Annual Committee Reviews

All MEES students are required to convene a committee meeting at least once per year and at that meeting provide a progress report summarizing their research and coursework to date, including a transcript. Further, a report summarizing the meeting, with a transcript and signatures of all committee members, will be filed with the MEES office within 2 weeks of the meeting. A form for this report is available on the MEES web site. It will be the responsibility of the advisor to see that this is done annually by the student.

COURSE REQUIREMENTS

The course requirements differ for each AOS as follows.

ECOLOGY

1. Population Biology, including mathematical modeling (600 level, 3-4 credits)
2. Ecosystem Ecology and/or Community Ecology (600 level, 3-4 credits)
3. A 400 or 600 level course from one of the other MEES AOSs (from an approved list)
4. A course in Statistics/Biostatistics (600 level for the Ph.D., 400 level for the M.S.)
5. One graduate level seminar for each year in residence (on average)
6. Courses in Experimental Design and Analysis and in Scientific Writing are strongly recommended
7. One course or seminar in the philosophy of science, ethics and/or Environmental Management (a 3-4 credit course can satisfy item 4) (400 or 600 level, 1-4 credits)
8. A specialized field or laboratory based Ecology course (600 level, 3-4 credits)

ENVIRONMENTAL CHEMISTRY

Requirements for students entering 2004 or later (M.S. and Ph.D.):

1. One fundamental and one advanced course in Environmental Chemistry or Geochemistry (one 400-600 level, one 600-700 level, 3-4 credits)
2. One course in Physical Transport Processes (600 level 3-4 credits)
3. One course in Aquatic Toxicology/Ecology (600 level 3-4 credits)
4. One 400 or 600 level course from one of the other MEES AOSs (from an approved list)
5. One course or seminar in Environmental Management, Policy, Ethics, or Philosophy of Science (a 3-4 credit course can satisfy item 4) (400 or 600 level)
6. A course in Statistics/Applied Mathematics (600 level for the Ph.D., 400 level for the M.S.)
7. One graduate level seminar for each year in residence (on average) up to cap
8. One or more courses in Physical Chemistry are strongly encouraged (2-4 credits each)
9. Courses in Experimental Design and Analysis and in Scientific Writing are also recommended

Requirements for students entering prior to 2004 (M.S. and Ph.D.):

1. One course in Environmental Chemistry or Geochemistry (400 or 600 level, 3-4 credits)
2. One course in Physical Transport Processes (400 or 600 level 3-4 credits)
3. One course in Aquatic Toxicology/Ecology (400 or 600 level 3-4 credits)
4. One 400 or 600 level course from one of the other MEES AOSs (from an approved list)
5. One course or seminar in Environmental Management (a 3-4 credit course can satisfy item 4) (400 or 600 level)
6. A course in Statistics/Biostatistics (600 level for the Ph.D., 400 level for the M.S.)
7. One graduate level seminar for each year in residence (on average)
8. One or more courses in Physical Chemistry are strongly encouraged (2-4 credits each)
9. Courses in Experimental Design and Analysis and in Scientific Writing are also recommended

ENVIRONMENTAL MOLECULAR BIOLOGY/BIOTECHNOLOGY

1. One course in Molecular Biology/Genetics (600 level, 3-4 credits)
2. One course in Cell Biology/Physiology (600 level, 3-4 credits)
3. One course in Ecology (400 or 600 level, 3-4 credits)
4. One course in Advanced Chemistry /Biochemistry (400 or 600 level, 3-4 credits)
5. One elective 400 or 600 level course
6. One course or seminar in Environmental Management, Policy, Ethics, or Philosophy of Science (a 2-4-credit course can satisfy item 5) (400 or 600 level)
7. One course in Statistics/Biostatistics (600 level for the Ph.D., 400 level for the M.S.)
8. One graduate level seminar for each year in residence (on average) up to cap
9. Courses in Experimental Design and Analysis and in Scientific Writing are also recommended

Note: For the M.S. degree, only three of the first four requirements must be fulfilled (5-8 are required for all students).

ENVIRONMENTAL SCIENCE

1. One approved course from three of the four distribution areas (biology, chemistry, physical science, management) for M.S. students; and from each of the four distribution areas for Ph.D. students. One of these courses can be at the 400 level, the others will be at the 600 level or above
2. One course in Statistics/Biostatistics (600 level for the Ph.D., 400 level for the M.S.)
3. One graduate level seminar for each year in residence (on average) up to cap
4. One or more courses in computer science or computer applications are strongly recommended
5. Courses in Experimental Design and Analysis and in Scientific Writing are also recommended

FISHERIES SCIENCE

At least 3 of the following 5 courses must be successfully completed by all students entering the Fisheries Science AOS. The requirements may be waived if equivalent course work has been obtained elsewhere, or if the student and his or her Research Advisory committee successfully petition the AOS Committee.

1. Fisheries Science and Management
2. Fisheries Ecology
3. Aquaculture
4. Quantitative Fisheries Science
5. Graduate Level Course in Oceanography (physical, chemical or biological) or Stream Ecology

In addition, the following core courses are required:

6. A 400 or 600 level course from one of the other MEES AOSs (from an approved list, which can include items 2, 4, and 5)
7. One course or seminar in Environmental Management (item 1 or 4 satisfies this requirement; any such 3-4-credit course can satisfy item 6)
8. A course in Statistics/Biostatistics (600 level for the Ph.D., 400 level for the M.S.)
9. Courses in Experimental Design and Analysis and in Scientific Writing are strongly recommended
10. One graduate level seminar for each year in residence (on average).

OCEANOGRAPHY

Biological Oceanography:

A Bachelor's degree in the natural or life sciences (i.e., equivalent to UM undergraduate Biology

1. One 3-credit course in Physical Oceanography (MEES 661 or equivalent)
2. One 3-credit course in Biological Oceanography (MEES 621 or equivalent)
3. One 3-credit course in Chemical Oceanography (CHEM 723 or equivalent)
4. Two 3-credit courses in Oceanography or related fields (400 or 600 level) including: a recommended additional interdisciplinary course, although item 1 above can satisfy the MEES requirement for interdisciplinary depth
5. One course in Statistics/Biostatistics (600 level for Ph.D. and 400 level for M.S.)
6. One course or seminar in Management, Scientific Philosophy or Ethics
7. One graduate level seminar for each year in residence (on average) up to cap
8. Courses in Experimental Design and Analysis and Scientific Writing are recommended.

Physical Oceanography:

1. One 3-credit course in Physical Oceanography (MEES 661 or equivalent)
2. One 3-credit course in Biological Oceanography (MEES 621 or equivalent)
3. One 3-credit course in Chemical Oceanography (CHEM 723 or equivalent)
4. Two 3-credit courses in Oceanography or related fields (400 or 600 level) including: a) one course in rotating fluid dynamics, and b) one course in non-rotating fluid dynamics
5. One course in Statistics/Biostatistics (600 level for Ph.D. and 400 level for M.S.)
6. One course or seminar in Management, Scientific Philosophy or Ethics
7. One graduate level seminar for each year in residence (on average) up to cap
8. Courses in Experimental Design and Analysis and Scientific Writing are recommended.

Comprehensive Examinations

All PhD students are required to pass a comprehensive exam. The exam is typically taken at the end of the fourth semester, and no later than the end of the fifth semester. The format for the comprehensive exam varies slightly between AOS tracks. Students should consult their advisor for the specific format of his/her exam, but the general guidelines are as follows.

The comprehensive examination generally consists of both a written (generally not to exceed 5 consecutive 6 hour days) and an oral (not to exceed 4 hours) examination. The written examination is taken first, with scheduling of the subsequent oral examination contingent on successful completion of the written exam. Each Advisory Committee member may submit candidate questions to the student's advisor, who is responsible for collating the questions, checking for excessive overlap and necessary breadth in topics, and insuring that the written examination is of appropriate length. Each question in the written examination may be closed book, open book, or a combination, as decided committee member writing the question.

The student's responses to the written examination are distributed to the Advisory Committee

members for evaluation. Generally, the student's responses to the written examination questions are evaluated by the committee as 'unsatisfactory', 'satisfactory but requiring further elaboration', or 'satisfactory'. If the majority of the committee rates the responses in the latter two categories, then the oral examination may be scheduled. If the majority rates the responses 'unsatisfactory', the student has failed the written examination and must retake and pass a new written examination at a latter date.

The oral portion of the comprehensive examination is designed to probe in more detail the student's responses to the written examination. Other topics may also be discussed.

The composition of the Advisory Committee and the administration of the Ph.D. comprehensive examination must follow the rules of the MEES program and the institution's Graduate School.

ECOLOGY

The areas of examination include three core areas and two additional areas:

Core Exam Areas

Three of four comprehensive exam areas:

1. Community Ecology
2. Ecosystems
3. Evolution
4. Population Ecology

Additional Exam Areas

Two of four comprehensive exam areas:

1. Physiological Ecology
2. Statistics and Experimental Design
3. Ecological Energetics
4. Quantitative Ecology

ENVIRONMENTAL CHEMISTRY

The suggested areas of examination are:

1. Environmental chemistry and geochemistry
2. Physical transport processes
3. Environmental toxicology and/or ecology
4. Experimental design and statistical analysis
5. Environmental management/applied science

ENVIRONMENTAL MOLECULAR BIOLOGY/BIOTECHNOLOGY

The suggested areas of examination are:

1. Biochemistry and Biophysics
2. Molecular Genetics and Evolution
3. Statistics and Modeling
4. Molecular Biology and Biotechnology
5. Physiology and Pathobiology
6. Microbial Ecology
7. Microbial Genetics and Physiology
8. Molecular Approaches to Fisheries and Aquaculture

ENVIRONMENTAL SCIENCE

The suggested areas of examination are as follows. Ph.D. students should be examined in *five* of these *seven* areas, with General Ecology/General Environmental Science required to be one of the *five*.

1. General Ecology/General Environmental Science
2. Natural Resource Management
3. Environmental Chemistry
4. Statistics and Modeling
5. Environmental Management, Economics, and Policy
6. Environmental Technology and Physical Science
7. Pollution Ecology and Environmental Toxicity

OCEANOGRAPHY

The suggested areas of examination are as follow. Each Oceanography AOS student will be examined in at least *three* of the following areas:

1. Physical Oceanography
2. Biological Oceanography
3. Chemical Oceanography
4. Geological Oceanography
5. Statistics
6. Management

For all Areas of Specialization, please note that a copy of the questions and graded answers to the written must be provided to the MEES office following completion of the examination. The link to forms for submission of outcome of the comprehensive exam is provided below.

Dissertation Proposal

Following successful completion of the comprehensive examination, and generally within one year, formal application to candidacy (for PhD students) is accomplished through the preparation of a dissertation proposal and an oral defense of that proposal. Advisory Committee must receive the formal research proposal at least two weeks prior to the defense date; the MEES office must be notified of date and committee members at this time. A report of the defense must be filed with the MEES office within two weeks of defense. The proposal defense should be held within two years of entrance into the program, and **before** the research is completed. Although the format for the proposal may vary depending on topic, in general it is expected to be prepared in the format that is consistent with a formal grant application. It should include a background and review of the literature, a discussion of research progress to date, a hypothesis and statement of objectives, and a complete description of the methodologies to be used. The oral defense provides the opportunity for the student's committee to determine whether the research plan is sound and whether the student has the proper motivation, intellectual capacity and curiosity, and has or can develop the technical skills necessary to successfully pursue the Ph.D. degree. The student passes if there are at least four affirmative votes. If failed, the student must re-defend the

proposal within 1 year. A second failure will result in cancellation of matriculation.

Following the oral defense of the proposal, the signed form must be filed with the Graduate School within one week of passing proposal defense. A link to the appropriate form is provided below. Students must be advanced to candidacy at least six months before the final defense is to be held. At the successful completion of this defense the student officially applies for Advancement to Candidacy for the Ph.D. degree and should submit the necessary forms to the Director of the MEES Program for transmission to the Graduate School. Students must be admitted to candidacy at least six months prior to the Defense of the Dissertation (final defense).

Dissertation Defense

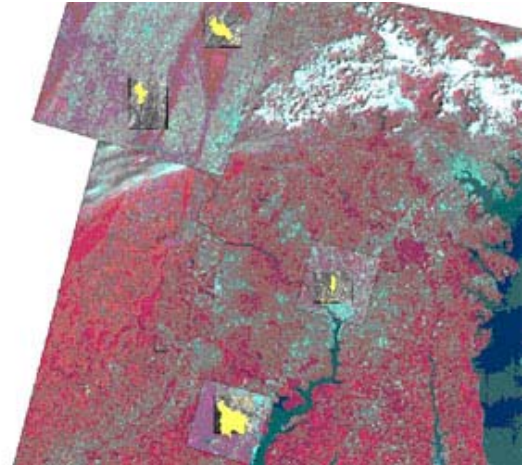
An Oral Defense of the Thesis, administered according to Graduate School regulations will take place at the completion of the research project. This defense will be conducted by the Research Advisory Committee and will be administered once all other degree requirements have been fulfilled. The Thesis Defense will generally last no longer than two hours, but the time will be long enough to ensure an adequate examination. The Research Advisory Committee also approves the thesis, and it is the candidate's obligation to see that each member of the committee has at least two weeks in which to examine a copy of the thesis prior to the time of the defense.

A candidate for the Ph.D. degree will present a public seminar on the dissertation research during the academic year in which the degree will be awarded. Students expecting degrees at the end of the summer must be scheduled for presentation before the end of May. The seminar should, under normal circumstances, be given within five weeks in advance of the day of the oral final examination. The student and Advisor will be responsible for initiating arrangements through the MEES Office for the date and advertisement of advertisement of the seminar. The seminar will be open to faculty, students, and other interested parties. The final oral defense of the dissertation is conducted by a committee of the graduate faculty approved by the Dean for Graduate Studies (the Research Advisory Committee plus a Dean's Representative).

Nominations for membership on this committee are submitted on the designated form through the MEES Director by the student's Advisor, by the third week of the semester in which the student expects to complete all requirements, and no later than six weeks, prior to the dissertation defense. The time and place of the examination are established by the chair of the committee. The student is responsible for distributing a complete, final copy of the dissertation to each member of the committee at least two weeks before the examination date. Announcement of the final examination will be made through the MEES Office to all members of the MEES faculty at least 2 weeks prior to the examination.

All final oral examinations are open to all members of the graduate faculty, although only members of the examining committee may question the candidate. After the examination, the committee deliberates and votes in private. Two or more negative votes constitute failure. The student may be examined no more than twice. Following successful completion of the final examination, a final copy of the dissertation must be supplied to the MEES Office, in addition to those required by the Graduate School.

The Research Advisory Committee may conclude that the candidate has passed or failed. A student may be conditionally passed with the provision that minor changes in the thesis be made and approved by the Major Advisor. A student who fails may at the discretion of the committee and with approval of the MEES Director and the appropriate Graduate School be permitted to stand a second defense after acting on suggestions for improvement of the thesis (collection of more data, use of different statistical analysis, rewriting of the discussion, etc.), at such time as the advisor considers appropriate. Once the thesis has been successfully defended, one copy must be supplied to the MEES Office in addition to the copies required by the Graduate School. For AL students, one copy should also be given to the Appalachian Laboratory Library.



**Student theses span from
physiological, organismal, to
ecological**



Recap and Checklists

Provided below is a summary checklist of the requirements for each degree. Detailed descriptions of these requirements have been given above.



MS Student Checklist

1. Course work

- a. A minimum of 30 credits with 24 credits of course work and 6 credits of graduate research. Of the 24 course credits, 12 of them must be at the 600 level or higher. Exceptions and waivers for equivalent courses taken before entry may be used to meet requirements of the student's AOS upon approval by the appropriate AOS Committee. Although graduate courses taken elsewhere may serve to fulfill requirements, only six credits from such courses may be transferred. Courses used to fulfill requirements for a previously awarded degree cannot be used for transfer credits.
- b. One seminar course (MEES 608 or equivalent) must be taken for each year in residence (on average).
- c. One approved Statistics course (400 level or higher).
- d. One graduate course representing significant interdisciplinary breadth, preferably outside the student's AOS.
- e. One course or seminar in Environmental Management (a 3-4 credit course can satisfy item d).

2. Thesis defense. Announcement of the final examination will be made through the MEES Office to all members of the MEES faculty at least 2 weeks prior to the examination. Following successful completion of the final examination, a final copy of the dissertation must be supplied to the MEES Office, in addition to those required by the Graduate School. One copy must also be given to the AL Library. It is recommended that each committee member also receive a copy of the dissertation.



PhD Student Checklist

1. Course Work

- a. The student must complete a minimum of 36 credits, with at least 24 credits of course work and 12 credits of dissertation research. Twelve credits of course work must be at the 600 level or above. Credits used to obtain a M.S. degree at U.M. or elsewhere cannot be transferred to the Ph.D. program. However, if a student has completed a M.S. degree, up to 16 credits of appropriate courses can be waived by petition to the AOS committee.
- b. One seminar course (MEES 608 or equivalent) is required for each year in residence (on average).
- c. One approved Statistics course (600 level or higher).
- d. One graduate course representing significant interdisciplinary breadth, preferably outside the student's AOS.
- e. One course or seminar in Environmental Management (a course can satisfy d).

2. Examinations

- a. Comprehensive Examination. The exam must be taken by the end of the student's fifth semester. The MEES Director's Office must be notified at least 2 weeks in advance of the pending examination. A report of the examination will be filed with the Director's Office following the examination.
- b. Dissertation Proposal Defense. The research proposal should be defended within 1 year of passing the Comprehensive Examination and at least 1 year before projected completion of the degree requirements. The Director's Office must be notified of the pending examination several weeks prior to its administration and a report of the examination must be filed with the Director's Office following the examination. At the successful completion of this defense the student officially applies for Advancement to Candidacy for the Ph.D. degree and should submit the necessary forms to the Director of the MEES Program for transmission to the Graduate School.

3. Dissertation Seminar and Defense of the Dissertation Research.

Announcement of the final examination will be made through the MEES Office to all members of the MEES faculty at least 2 weeks prior to the examination. Following successful completion of the final examination, a final copy of the dissertation must be supplied to the MEES Office, in addition to those required by the Graduate School. One copy must also be given to the AL Library. It is recommended that each committee member also receive a copy of the dissertation.

Preparation of the Dissertation

The format and preparation of the dissertation must follow strict guidelines. However, these vary by campus to which the student is enrolled (i.e. College Park, Frostburg State, etc.), and by degree and discipline. The MEES website provides links to each of these requirements.

MEES Forms

The following forms are downloadable from the MEES website (www.mees.umd.edu/index.htm):

Research Advisory Committee Meeting Report
Annual MEES Student Progress report
Report on Doctoral Comprehensive Examination
Report on Defense of Dissertation Proposal

Consult the web before using these forms as they are updated from time to time.

The Graduate School of the degree granting campus (i.e. College Park, Frostburg State, etc.) should also be consulted for additional forms for approval of advisory committees, dissertation defense, and graduation.

MEES Graduate Program Time Limits

MEES full-time Ph.D. students will be limited to seven years in which to graduate. Students must be advanced to candidacy – i.e. pass both the comprehensive examination (written and oral) and the proposal defense – within six semesters after entering the Ph.D. program.

MEES full-time M.S. students will be limited to four years in which to graduate.

A one-semester extension may be granted at the request of the student's advisory committee and the approval of the Director.

Part-time Student Status

Students in the MEES Program will be classified as full- or part-time by the MEES Office. Part-time students will be limited to nine years in which to graduate for a Ph.D. (with five years for advancement to candidacy), and five years in which to graduate for an M.S.

Part-time status will only be granted upon request of the student's advisory committee and approval of the MEES Director. Criteria will include number of hours worked (> 20 hours/week, not on an assistantship) and number of credits registered. Part-time status is generally <24 units.

Students considered part-time will not be able to receive UM assistantship or fellowship support.

Important Procedures for Students

The first thing a new student at AL should do is email Debbie Morrin-Nordlund to be put on the MEES student email list.

Registration

Registration for courses is done through the internet. This applies to courses taught at AL, College Park, or any of the other campuses of the University of Maryland System, such as University of Maryland Eastern Shore (UMES) or University of Maryland Baltimore County (UMBC).

Key Facts

MEES Website: www.mees.umd.edu/index.htm

MEES Director: Dr. Ken Paynter

MEES Assistant: Debbie Morrin-Nordlund

MEES office phone: 301-405-6938

Students do not automatically receive copies of the schedule of classes – you must access this information through the Testudo website. To access information on the web, your student ID is your social security number and your PIN number is originally set to be your birthday (MMDDYY). You can change your PIN number both over the web (via Testudo) and over the phone.

If you have difficulty registering for a particular course because the permission of the department is required, phone the MEES office (410-405-6938) for an electronic stamp for that course. The departmental permission should be entered into the registration computer within a day, and you will be able to register for the course.

Key Facts

www.testudo.umd.edu is the source for:

- course registration
- class offerings
- academic calendar
- account information
- transcript requests
- grades
- parking information

Registration for graduate and undergraduate FSU courses as a MEES student.

Sometimes MEES students at AL need to take an undergraduate prerequisite, or would like to take a graduate level course offered at FSU. There are specific procedures to make this happen. First, the student will need an inter-institutional enrollment form, which can be obtained from the Graduate Service Office in Pullen Hall at FSU. Then, the form needs to be filled out and mailed to the MEES office for signatures, and then mailed back to the student. The student then brings the completed form to the FSU Registrar in Pullen Hall and they will register the student for the class. The process of completing the form can take some time and the student should pay attention to registration deadlines at FSU, especially for undergraduate level courses – they *will* charge you late fees! To drop the course, the student must do so at FSU and UMD, but both can be done online. FSU Registrar: 301-687-4346

Textbooks

The required textbooks for courses offered through College Park are usually sold at the University Book Center located in the basement of the Stamp Student Union in College Park and

at the Maryland Book Exchange located across from the College Park campus on Route 1. The University Book Center has a web page at: <http://www.ubc.umd.edu/> where students can check the availability and costs of required textbooks for individual courses. Many classes do not require books, and instead use primary literature that can be accessed via the web.

Tuition Remission

Many students are eligible for tuition remission. Tuition remission covers the cost of class credits for the student and is paid by the grant or assistantships that has been awarded to the student. Forms are made available approximately one month before the beginning of the semester and an email reminder is usually sent around that time. Tuition remission may be available for the summer and winter semesters as well. Contact Heather Johnson if you have questions about tuition remission.

College Park Student Fees

All students at the University of Maryland College Park are charged mandatory student fees, which cover such things as shuttle bus service, tickets to athletic events and use of campus recreational facilities. Students at off-campus labs (i.e. HPL, CBL, and AL) can have these fees waived if they agree not to use any of the above-mentioned services. Currently MEES makes a list of students each semester who want these fees waived; graduate student representative at each campus collects names and provides them to the MEES office.

Frostburg State University Fees (for MEES students)

MEES students at AL taking graduate or undergraduate level courses through FSU must pay student fees required by FSU – they will not be waived.

Grade reports

End of semester grade reports are not mailed to students. To obtain final grades check the Testudo website.

Transcript requests

Copies of unofficial transcripts can be obtained via the internet through Testudo (<http://www.testudo.umd.edu/Registrar.html>). Likewise, official transcripts can be requested from the same website. There is no charge for official transcripts.

Important Procedures for Faculty

Scheduling courses on the interactive video network (IVN)

Courses on IVN are scheduled almost a year in advance. An email reminder will be circulated. The IVN schedule is usually heavily booked.

Retrieving class registration lists

Class registration lists can be accessed on the Testudo web site using a faculty password.

In general classes should have no fewer than 5 students to be offered, although exceptions may be made.

Submitting grades

Grades must be submitted electronically following the Testudo web site instructions. It is up to the faculty members to submit grades on time, including grades for students who are enrolled for research credits only. Generally research credits receive pass/fail grade only.

Reviewing new student applicants

New student applicants can be accessed at the following web site:

<http://tortoise.hpl.umces.edu/>. A password is required and can be obtained from Anne Wiley.

Key facts

Faculty Listing By AOS : http://www.mees.umd.edu/fac_ocean.htm

Approved Course List By AOS : <http://www.mees.umd.edu/list-ocean.html>



Foreign Student Information and Procedures

Foreign students should contact the Office of International Education Services to obtain the necessary information on visa requirements and immigration matters. There is a mandatory orientation session with this office for all new foreign students. A schedule is provided on their web site.

[IES Homepage](#)

[New Information!](#)

[Office & Contact Information](#)

[Admission of International Students](#)

[International Student Information](#)

[International Visitor & Faculty Information](#)

[Global Communities](#)

[International Spouses Organization](#)

[Study Abroad](#)

[UM Sevis Site](#)

[Forms](#)

[Fall 2003 - Spring 2004 Events Calendar](#)

[Resource Guide](#)

[Fall 2004 Orientation](#)

[2003 Tax Information](#)



International Education Services

The Office of International Education Services (IES) provides a wide range of information and services to International students and scholars at the University of Maryland including:

- The evaluation of transcripts for all applicants who have completed academic coursework outside of the U.S.
- Orientation services for International students admitted to the University.
- Counseling students on immigration concerns, financial problems, and cross-cultural issues.
- Assisting departments in obtaining appropriate visas for visiting scholars and faculty members.
- Providing advisement and programs for American and international students interested in studying outside the U.S.



[UM Home](#) | [Directories](#) | [Search](#) | [Admissions](#) | [Calendar](#)
Maintained by [International Education Services](#)
Direct questions and comments to sselvin@deans.umd.edu

The Biology Department at Frostburg State University

Program Overview

The Biology Department at Frostburg State University offers Masters of Science degree programs in wildlife/ fisheries biology and applied ecology and conservation biology. The latter has two different tracks available, which differ in only one course requirement. The conservation biology track can be completed entirely on the FSU campus, and the watershed track includes a University of Maryland course at the AL. See the graduate student catalog for more details on these programs and classes available and required at FSU. A graduate student catalog will be mailed to you when you first enroll. Graduate student handbooks are also available in Pullen Hall and at <http://www.frostburg.edu/grad/catalog.htm>. An electronic version of the biology portion is available at <http://www.frostburg.edu/grad/pdf/2004-2006/11-biol.pdf>. The handbook will contain the information necessary for meeting your degree requirements.

Key Facts

FSU Biology Department

Website: www.frostburg.edu/dept/biol/biogradstudies.htm

Department Chair: Dr. Bill Seddon, 201 Compton Hall, (301) 687-4707, wseddon@frostburg.edu

Graduate Program Coordinator: Dr. Scott Fritz, 314 Compton Hall, (301) 687-4306, rfritz@frostburg.edu

Department Assistant: Ms. Bebe Elrick, 201A Compton Hall, (301) 687-4166, belrick@frostburg.edu

Workroom: 201B Compton Hall (location of student and faculty mailboxes)

Important Procedures for Students

Registration

All FSU students must use the PAWS internet system (<http://paws.frostburg.edu/students/>) to register for classes. A login and password will be mailed to you when you are admitted to FSU. If you have not received this information in time to register for classes, call the FSU Help Desk at 301-687-7777 between 8:00 AM and 4:30 PM, Monday through Friday. FSU has password changing policies where you must select a new password every two months, it must be one you have not used in the last 6 months, and it must contain 3 of the following types of characters: capital letters, lower case letters, symbols, and numbers. Call the help desk if you have forgotten your password and need it reset. The help desk can also provide you with the PAWS four digit code for the current semester, which will make using PAWS much more efficient.

All FSU students may take classes at the AL, and these classes can be used to fulfill the FSU biology department's elective requirement. FSU students can register for AL classes in two ways:

1. Using PAWS where AL courses are usually listed as a section of Biology 650. If you register in this way, the class will be listed as a biology department class and the course may not count as an out-of-department elective towards your course requirements.
2. Using an inter-institutional enrollment form. This quadruplicate form is available at the FSU registrar's office in Pullen Hall, and requires the signature of Dr. Scott Fritz (biology department graduate coordinator, 314 Compton Hall). Check through PAWS to check that the paperwork has gone through and you have been successfully added the class. If you register this way, the class will be listed as a MEES class (which you are taking through the UM College Park campus) and will count as one of the two out-of-department elective classes that you are required to take. The College Park campus has been known to send out a bill before all of the paperwork is processed, but they generally correct the error within a few weeks, however, they do not send out a second mailing notifying you that the charges have been reversed.

After your first semester at FSU, your advisor will have to 'activate' your account in PAWS before you can register for classes each semester. If your advisor is at FSU they will do this without you even being aware of the process, but if your advisor is at AL they may not be familiar with this step and may need to be reminded. If they cannot access PAWS, then it is likely that their password has been changed, and they should call the help desk.

FSU Campus Fees

Campus fees (approximately \$500 per semester depending on your course load) are required to be paid by every FSU graduate student, *even if you have a tuition waiver*. FSU does not send out paper bills and if the fees are not paid by the deadline, late fees will accrue. Use PAWS to find out the amount you owe. E-billing, when they e-mail your bills, is available by enrolling through PAWS. If late fees accrue before you receive your admissions packet, go to graduate admissions in Pullen Hall and ask for a late fee waiver.

Financial Aid

Loan forms are available in the financial aid office in Pullen Hall. Loan forms need to be filled out once per school year. Loan money is distributed in both fall and spring semesters when requesting money for one whole school year, and in two payments six weeks apart when requesting money for only one semester. Loan checks may be picked up from University and Student Billing, Pullen Hall 301-687-4231.

Student Identification Cards

Student identification cards can be obtained at Chesapeake dining hall, they will take your photo and give you your ID on the spot. Student IDs are needed for checking books out from the library, public transportation, among many other things. Students can also obtain free copies of daily FSU newspapers in the Lane Student Center, near the entrance of the bookstore, with student ids.

Personal Information and FSU

Address changes should be made at up to three locations:

1. Registrar's office in Pullen Hall, especially when you move to Frostburg (everyone)
2. Payroll office on the 3rd floor of Hitchens Hall to change address for paystubs (if you are on a teaching assistantship at FSU)
3. Administration office at the Appalachian Laboratory (if your advisor is at AL)

FSU may sell student personal information to telemarketers, etc. To avoid this, go to the Registrar's office in Pullen Hall and ask for the non-disclosure of personal information form. This form needs to be filled out at the very beginning of the semester.

Inclement Weather Policy (FSU)

The decision to delay or cancel classes at FSU is made by 7:00 AM and can be obtained by calling university voicemail at 301-687-4030. Additionally, most area radio stations will carry the announcement. For example 91.9 FM (NPR) announces school cancellations at :28 and :58 past each hour.

The Appalachian Laboratory inclement weather policy is on page 42.

Graduate Student Milestones

Select Master's Committee

The Master's Committee must consist of your major professor plus at least two other members, one of who must be faculty of FSU. Individuals from other institutions or agencies may serve on the committee, but they must be acceptable as an adjunct faculty at AL or the Biology Department. The deadline for students entering in fall is April 15 and for students entering in spring is November 15.

Oral Qualifying Examination

The oral qualifying examination is a diagnostic test to help your committee develop a program of study that will strengthen your understanding of the concepts in areas where you have shown weakness. In the event of substandard performance in all areas, a retest must be taken within six months of the first exam. Failure of the second examination or failure to retake the exam within

six months will result in termination from the M.S. program. The deadline for students entering in fall is April 15 and for students entering in spring is November 15.

Plan of Study

A plan of study (list of courses) must be developed with your committee after successful completion of the oral qualifying exam. The plan of study must be approved unanimously and signed by the all committee member. The approved Plan of Study form will be forwarded by the advisor to the Graduate Program Coordinator.

Thesis Proposal

A copy of the written thesis proposal (see FSU graduate student handbook for details) must be signed by all members of the committee and forwarded to the Graduate Program Coordinator. The thesis proposal must be distributed to your committee at least one week prior to the meeting where that committee will consider approval of your proposal. Apply for degree candidacy after passing the oral examination and approval of your thesis proposal (see FSU graduate student handbook for details). Forms are located on the FSU Biology Graduate student website.

Thesis Defense

After completing an original thesis, the student will give an oral presentation of the thesis, and then defend the thesis in a final Oral Thesis Defense. See FSU graduate student handbook for details.

Continuous Registration

Students must be registered for at least one credit hour of BIOL 710 during the intended semester of graduation. If degree requirements are not completed during the semester of initial application for graduation, the student must continue to register each semester until graduation occurs. A student seeking August graduation must register in the first summer session. A student failing to register for a semester will automatically be dropped from the program, and must reapply for admission to graduate. Students who are readmitted will register for an appropriate number of semester credits as determined by departmental policy and implemented by the Graduate Program Coordinator.

FSU Facilities and Services

Key Facts

FSU campus map <http://www.frostburg.edu/fsumap/fsumap.htm>

FSU information desk: Lane Student Center, 301-687-4411

FSU graduate services: Pullen Hall, 301-687-7053, gradservices@frostburg.edu

FSU payroll office: Hitchens Hall, 301-687-4332

Lewis J. Ort Library: 301-687-4395

FSU bookstore: 301-687-4341

Lewis J. Ort Library

The FSU library website is located at <http://www.frostburg.edu/dept/library/>. The website provides options to renew books, request books from other campuses, and access to research databases. To login select a USMAI catalog, then select login on the upper right corner. Logins are the number on your student ID, and the password is your last name. Notification of the arrival of requested books from other campuses is through mail and books will be held for 10 days at the front desk. To learn more about FSU library services go to the reference desk (down one floor from the main entrance) during business hours to speak with a reference librarian. A highlight of the FSU library is the Maryland maps section that includes various state and county maps, such as geologic and soils maps, which are generally available for check out. The fifth floor of the library has a photocopier available for official use, e.g. making copies of articles for your research. The code from an existing FSU graduate student. After making copies, put your name, department (biology), number of copies made, and purpose (articles) on the sign-in sheet above the copier.

Computers

There are several computer labs located on campus. A 24-hour computer lab is located in the back of the Ort library that you can access using your student ID. Computer labs are also located in Pullen Hall and in 330 Compton Hall. To login into FSU computers, use the same login and password used to access PAWS. A drive to save documents is located in windows explorer called username on “fsunas1” or something similar. However, access to these documents is not available off campus, therefore, you may want to buy a USB flash drive (e.g. memory stick or thumb drive—a small portable drive) for saving your documents. USB flash drives can be purchased at the campus bookstore (301-687-4341) in the Lane center and other local retail stores.

Computer and PAWS login code is used for your FSU email address. For example if your login is schill0, then your email address will be schill0@frostburg.edu. Email can be accessed at <http://www.frostburg.edu/mail/> and the password will be the same as used in PAWS.

Blackboard is an internet-based system that some instructors use in support of their classes. Professors post their lecture notes or assignments, which enables the students to download them anytime. AL classes and FSU classes use different blackboard sites. AL classes are available through <http://blackboard.cbl.umces.edu/> and the instructor will ask you for a login, or assign you one. FSU classes are available through <http://blackboard.frostburg.edu> and login and passwords are the same as in PAWS.

Fleet Vehicles

FSU graduate students are permitted access to the FSU fleet vehicles for conducting research or other university business, at no charge. Vehicles must be reserved in advance (far in advance during the summer) by e-mailing cars@frostburg.edu. Include name and the name of any passengers, department, the purpose of the trip, the destination of the trip, the dates and times of the trip, and vehicle type requested in the reservation email. At the reserved time, the vehicle can be picked up at campus police, which is staffed 24 hrs. For far destination trips, a gas card can be requested. Paperwork must be filled out before you check out a car for the first time, which should be completed several days in advance. Bebe Elrick, biology department assistant, may supply the forms. Additionally, safe-driver training sessions are held at the beginning of each semester. If you are teaching a Biology 109 lab you will be required to take the training course.

Health Services

FSU has free counseling and psychological services available. They are located in Sand Spring Hall room 101, phone 301-687-4234. Health services are available on campus at Brady Health Center. Visits cost \$10 plus costs of any medicines or tests, phone 301-687-4309.

Cordts Athletic Facility

The Cordts athletic facility on campus has a weight room, a swimming pool and various athletic courts, along with activities such as a karate club and exercise classes. Some items such as racquetball and tennis racquets can be checked out with a student ID.

Transportation

FSU provides a free shuttle bus for students. The route covers campus, Main Street in Frostburg, and the mall in LaVale. The shuttle runs through the evening only during the school semester. Schedules are available at the information desk on the second floor of the Lane Center. Allegany County Transit (ACT) operates several other buses including hourly service to Frostburg and Cumberland during business hours. ACT buses are also free to FSU students when you show your student ID upon boarding. The ACT schedule is typically posted on the bulletin board on the first floor of the Lane Center. For more information on both bus services visit <http://gov.allconet.org/ACT/>.

Appalachian Laboratory



Directions to the AL

The Appalachian Laboratory is located in Frostburg, Maryland, just miles from western Pennsylvania and northeastern West Virginia.

From Baltimore: Take I-70 west through Frederick and Hagerstown. Continue on I-70 for about 26 miles to Hancock and take the exit for I-68 (left exit) heading towards Cumberland and Morgantown, WV. Continue to the second exit for Frostburg, Exit 33 (Midlothian/ Braddock Road). Bear right and proceed about a quarter mile down the hill on Braddock Road. The Appalachian Laboratory will be on your left, set back in the woods. If you get to the bottom of the hill at the main campus of Frostburg State University you have gone too far.

From Washington, DC: Take the Capital Beltway (I-495) to I-270. Take I-270 north to Frederick. Join I-70 west and follow instructions from Baltimore as described above.

From Morgantown, WV, and west: Take I-68 east to Exit 33 (Midlothian/Braddock Road). Turn left onto Braddock Road and proceed approximately one-quarter mile down the hill on Braddock Road. The Appalachian Laboratory will be on your left, set back in the woods. If you get to the bottom of the hill at the main campus of Frostburg State University you have gone too far.



Campus and Facilities

AL moved into a new, 47,000 square foot building at the end of 1998, located in a wooded area adjacent to the [Frostburg State University](#) campus. The facility provides office space, as well as state-of-the-art laboratories for plant and soil ecology, aquatic chemistry, watershed hydrology, landscape ecology, limnology, wildlife ecology, behavioral ecology, toxicology, and conservation biology. Other support facilities include a computer room, a large greenhouse, a clean room, growth chambers, a small library, a workshop, and walk-in freezers and controlled temperature rooms. Also in the facility are a teaching laboratory and a small conference facility equipped for Interactive Video Networking (IVN). In addition to providing space for expansion of AL's research and education programs, the building allows for increased research collaboration with faculty and students at Frostburg State University, and with scientists from both state and federal agencies. Below are in-depth descriptions of just a sample of the many laboratories at AL. Learn more about all AL's facilities at www.al.umces.edu/Facilities/facilitiesmain.htm

The landscape ecology lab specializes in the analysis and display of data derived from satellite images and field studies conducted at the Appalachian Laboratory. State-of-the-art software and equipment is available for the preparation, analysis and storage of spatial information regarding local and regional land-use and land-cover data.



The limnology lab is equipped with a fume hood and several analytical instruments, including a Carlo-Erba CHNS/O analyzer, a Lachat nutrient autoanalyzer, a Dionex ion chromatograph, a bomb calorimeter, and an isothermal microcalorimeter. Together with the sample preparation facilities in the adjacent laboratory, these facilities give investigators at the Appalachian Laboratory the ability to measure carbon, nutrients, cations and anions in liquid and sediment samples, including ground, digested, or extracted plant and soil samples.



The soil and plant laboratory contains space and equipment for sample processing, including floor-standing and benchtop drying ovens and muffle furnaces, together with Wiley mills and a jar mill for grinding plant and soil material. Additional space is used to store field gear such as soil augers, GPS units, and tree climbing gear, and serve as a staging area for field operations.

AL has **three water chemistry laboratories.**

The wet-chemistry module lab is used for preparing, filtering, preserving, and aliquoting natural water samples for subsequent chemical analysis. The laboratory contains several types of instruments for measuring pH and specific conductance. Water chemistry lab 2 is used for automated analysis of natural water samples for the following: concentrations of metals (by either flame or graphite furnace atomic absorption/emission spectroscopy); nutrients (N and P by flow injection analysis); total C, H, and N (by combustion analysis; and major ions (by ion chromatography).

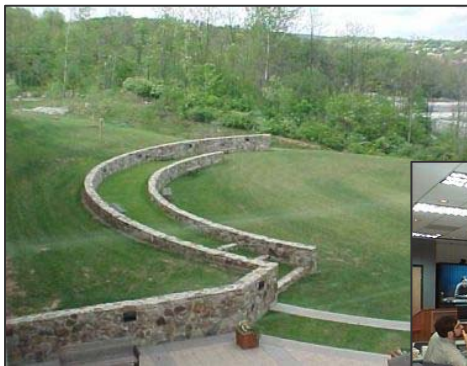


The third water chemistry lab is used for the automated analysis of water samples for concentrations of metals by ICP-AES; acidity, alkalinity, and ANC by titration; nutrients, aluminum, and silica by flow injection analysis; and carbon species (DOC, TOC, DIC, TC) by the UV-assisted persulfate digestion technique.

There are also labs specialized for wildlife ecology, forest ecology, conservation biology, bioassay culture, and benthic ecology.



The greenhouse is approximately 4,000 sq. feet and consists of a head house, mechanical room and 3 individual zones for specialized research in such areas as plant growth, plant competition and plant diversity. Each zone's environmental condition is independently controlled to suit the researcher's needs and requirements via computer-operated fans, shades and vents, etc. The head house contains the computer system that controls the greenhouse, a drying oven and soil sterilizer, and the necessary materials for research experiments such as soil, sand, and gravel.



Services

Computer and Email

All students, faculty, and staff of the Lab are eligible for a computer account. An account is necessary for accessing Laboratory computers, the Virtual Private Network (VPN) service, shared network resources like shared storage and shared printers, and for email. Accounts are provided as a portion of the New Personnel Routing Procedure that each new person must complete. All UMCES computer accounts are governed by the University of Maryland guidelines for the Acceptable Use of Computing Resources (also referenced as the "acceptable use guidelines") available at: <http://www.inform.umd.edu/aug>, as well as the specific guidelines of the Appalachian Laboratory. These guidelines are available through ALOnline at <http://alonline.al.umces.edu/acceptableuse> (TBC).

ALOnline

ALOnline, at <http://alonline.al.umces.edu/>, is a shared web resource where the Laboratory community may go to check the latest Lab news, policies, and discussions. A considerable amount of help concerning computer resources is available there, as well as on-line editions of the Laboratory safety manual and this Student Handbook. Any user of the Laboratory facilities may create an account on ALOnline, allowing him or her to post content, make comments, and contribute back to the overall usefulness of the site for the community. Each user with an account on ALOnline has a 'blog' that is available within the Lab community only. In addition, certain business office functions, like making vehicle and purchase requests, are hosted on ALOnline. Some highlights on ALOnline are:

- <http://alonline.al.umces.edu/node/1> "front page" to lots of computer help
- <http://alonline.al.umces.edu/forum/31> forum for computer support and issues
- <http://alonline.al.umces.edu/node/130> connecting to a network drive
- <http://alonline.al.umces.edu/node/165> connecting to a network printer
- <http://alonline.al.umces.edu/node/388> how to use the "Backup drive"
- <http://alonline.al.umces.edu/studenthandbook> on-line edition of this handbook (TBC)

In addition, anyone may have a worldwide-accessible blog, free of charge, hosted on AL's blog site, located at <http://blog.al.umces.edu/>. See the Computer Services department for instructions about getting your own blog up and running.

Network resources

The Appalachian Laboratory provides network storage to students, faculty, and staff for a variety of purposes:

- A "Backup drive" is available at \\backup\<>your account name> for you to place up to 15GB of files that will be subject to nightly automatic backup by the Computer Services staff.
- A "Shared Drive" is available at \\aladn\al-share for you to place files that everyone in the Lab will have total access to.
- A "Home drive" is available at \\alx\<>your account name> for you to place up to 1GB of files that you, and only you, will have access to as you move from computer to computer throughout the Lab.

Loaner Laptops

The Computer Services department currently maintains two laptops suitable for loaning out to students, faculty, and staff, suitable for presentations or other uses. These are provided on a first come, first serve basis. Laptop reservation is handled through the Systems Administrator.

Personally-Owned Computer Policies

Students wishing to use personally-owned computers to access Laboratory network resources must agree to the following terms:

- The Systems Administrator will be given Administrative access to the computer. The computer will be joined to the AL's computer domain.
- The Systems Administrator will install the Lab-wide virus protection software on the computer. Other virus protection software must be removed. The Lab-wide software will be configured to get updates daily from the central Laboratory computer.
- The Systems Administrator will configure the Windows Update Service on applicable machines so that the computer will get updates weekly from the central Laboratory computer.
- The computer will be subject to the same policies as Laboratory-owned computers, with the following exceptions:
 - Students are permitted to have Administrative access to machines that they personally own.
 - Software that is not approved by the Computer Services staff will not be removed during periodic audits; however, illegal activity, including software license violations, will be reported. Students must be able to provide proof-of-license for all software that is installed on personally-owned computers in use at the Laboratory.

Telephone, Voice Mail Access, and Cell Phones

The shared office on the second floor, Room 224, currently has a shared telephone, number 301-689-7142. Students are issued voice mail accounts only on request. These accounts are “virtual” boxes and can be accessed from within and outside the building. The shared office on the third floor, Room 339, currently has a shared telephone, number 301-689-7191. In addition, most of the desks in this area have also been equipped with telephones to provide direct lines and voice mail access to the occupants. Instructions for voice mail and telephone use are printed in the Appalachian Laboratory Telephone Directory. The instructions are also provided to all incoming students and employees. Additional copies can be provided upon request. The AL Telephone Directory can also be found on our website at <http://www.al.umces.edu/> under “People”. For information on acquiring a voice mail account or telephone access; and for any changes to existing phones or accounts, please contact Barbara Jenkins, x7115 or Stacy Cutter, x7104.

The lab currently has one loaner cell phone that is available for faculty/students to check-out when needed for work in the field or while out of town on AL business. Use of the loaner phone is considered on a first come, first served basis.

Student Identification Cards

Students at AL can fill out a student ID request form and have their student ID picture taken by Stacy Cutter. This information is then forwarded to College Park and you receive your ID in the mail. Student IDs are also available in the Mitchell Building on the College Park campus. To obtain an ID, you must have proof of identity, such as a valid driver’s license or passport. The fee for replacing a lost or stolen ID is \$20.

Appalachian Laboratory Library

UMCES students, faculty and staff may borrow books. Visiting scholars may apply for loan privileges and temporary identification. Other residents of Maryland may use the library but may not borrow materials. Contact Darlene Windsor (windsor@hpl.umces.edu) or Kathy Heil (heil@cbl.umces.edu) to obtain a patron number for electronic checkout and for general instructions on library services and use.

Periodical journals and reference books should be removed from the AL library only briefly for photocopying purposes. All photocopiers at AL are equipped with auditron boxes that require entry of a code before copies can be made. Photocopy codes can be obtained from your advisor/PI.

Access to an ever-expanding collection of databases (both bibliographic and full text) is available at the HPL (<http://www.hpl.umces.edu/services/library.html>) and UMCES (<http://www.cbl.umces.edu/Library/index.html>) library web pages. The University System of Maryland and Affiliated Institutions (USMAI) maintains an electronic catalog (<http://catalog.umd.edu>) and a customizable research port (<http://researchport.umd.edu>) with

links to electronic journals and databases. Interlibrary loan (ILL) requests may also be made for books and journal articles not available at either the AL or FSU libraries.

Questions and comments on library policies should be directed to Ms. Kathy Heil (heil@cbl.umces.edu). A powerpoint overview on library services can be found on the AL share drive.

Analytical Services

A variety of common use analytical equipment is available for student use with permission by each laboratory's steward and with training by AL's laboratory manager. Additionally, an Applied Environmental Chemistry course (MEES689Q) is offered every spring semester as an introduction to many common analytical techniques for graduate students. This is a rigorous, hands-on course that is recommended for any student who will be performing laboratory analysis in the scope of his/her work. It is recommended that this course be completed by the end of your second semester.

More information about common use analytical equipment can be found at: <http://www.al.umces.edu/analytical%20resources.htm>.

Shipping and Receiving

Students wishing to send packages via Federal Express or UPS should contact Stacy Cutter or Cami Martin at the front desk. Mail is delivered after lunch each day and a grad student may pick up the box and distribute the mail to the grad student office mailboxes. You will receive an email if a package has arrived for you and your name will be written on the box at the front desk.

Front Office Staff

The AL front office staff handles all vehicle requests, purchasing of lab and office supplies, travel authorizations, arrangements, and expenses, fleet reservations and maintenance, payroll and human resources, access approvals and key issuance, proposal routing, and any other issues that may arise.

Contact points for various issues are as follows:

- Cami Martin – purchasing, fleet reservations or vehicle issues, paycheck distribution, cell phone reservations
- Stacy Cutter – travel authorizations and arrangements, accounts payable, digital camera sign out, webpage updates
- Paulette Orndorff – health benefits and retirement, room reservations, IVN scheduling, Xerox issues

- Barbara Jenkins – access and key issuance, proposal routing, IVN technical issues, telecommunications, inventory control
- Heather Johnson – payroll and human resources, general concerns or issues

Please view this list as a first point of contact only. If the person listed as the primary contact is out or unavailable, please do not hesitate to ask another staff member for assistance.

Health, Safety, and Specialized Activities

Health and safety in the laboratory and in the field is of paramount concern. All incoming students must first complete AL's online safety training (<http://inside.al.umces.edu/safetyweb/Introduction.htm>).

Following successful completion of this online training and a subsequent meeting with AL's Chemical Hygiene Officer, students will be granted access to necessary laboratories and office areas, as well as a access card to the building. ALonline (<http://alonline.al.umces.edu/al-chemical-hygiene-plan>) contains AL's Chemical Hygiene Plan, which will help you determine all of the safety policies and procedures at AL and provide a refresher of the content that was covered in the online training module. The AL safety policies have been written to comply with Federal, State and Local regulations. Please remember that all these regulations are subject to change and therefore merit periodic review.

Emergency procedures are defined for fire, natural disaster, and other events that may cause a need for swift and orderly evacuations. Please review these often and be prepared to follow emergency procedures which may save lives, prevent injuries and save property. Names and contact numbers are given for emergency personnel. Additionally, flip charts are kept near all phones in laboratories that summarize appropriate procedures in case of specific emergencies.

In addition to laboratory safety, safety in the field is vitally important. AL's field safety manual can be found on ALonline (<http://alonline.al.umces.edu/field-safety-manual>). If you work in the field at all, you should consult this manual. Students are strongly encouraged to **not** work in the field alone, if possible. In cases where this is not possible, you should carry a cell phone. If you do not have a cell phone, limited use phones can be checked out through AL's business office.

Several activities are highlighted in the field safety manual, but a more complete review of safety issues can be obtained from the AL Chemical Hygiene Officer, Katie Kline.

In/Out Board

An additional resource provided to students (and staff) that are performing fieldwork is the In/Out board. This a board with forms located on the credenza where the vehicle notebooks are stored. You can fill out the form with your name, contact information, and trip information. In the event that someone doesn't return when expected, AL can contact the appropriate authorities

and arrange for assistance. AL staff will also have your contact information in case of an emergency. Although the form provides space to record where you plan to travel, if you have an extensive trip plan, it is suggested that you fill out a trip plan form with that information. You are not required to use this service but are strongly encouraged to do so, especially if you are working in the field alone.

Scientific Diving Program

Faculty and students at the University of Maryland Center for Environmental Science frequently use scuba diving as a scientific tool. Each laboratory within UMCES has its own diving committee overseen by the UMCES Dive Board. The UMCES Diving Program is in the process of becoming affiliated to the American Association of Underwater Scientists (AAUS), which will give UMCES diving reciprocity with other institutions. The guidelines we follow can be found in the UMCES Diving Manual.

To become an UMCES Scientific Diver, a series of requirements need to be fulfilled. Please contact the Head of the Diving Committee and/or the UMCES Diving Safety Officer. After becoming an UMCES diver, the requirements need to be updated on a regular basis.

Radiation Safety

To use radioactive materials, you must be approved by the UMCES Radiation Safety Officer. Contact Katie Kline for further information and requirements.

Other Policies

State Motor Vehicle Policies

www.dbs.umd.edu/motor/policy.php

AL Fleet Vehicle Policies

- Information on how to request a state vehicle from AL and the costs associated with vehicle use can be found at <http://alonline.al.umces.edu/vehicile-request>
- The vehicle request form can be found at <http://alonline.al.umces.edu/vrs>

Travel Policy

<http://www.umces.edu/about/travel>

Travel Approval Expense Form

<http://alonline.al.umces.edu/travel-approval-request-form>

Expense Form

<http://alonline.al.umces.edu/umces-expense-form-0>

Inclement Weather Policy (AL)

If the laboratory is going to act under a delayed opening or be closed for an entire day due to inclement **weather**, we will:

1. Put the closing/delay announcement on WFRB, WCBC, WKGO and WTBO by 7:15 a.m.
2. A delayed announcement will either a.) be stated on the radio as a specific time i.e. AL will open at 10 a.m. due to inclement **weather** OR b.) be stated on the radio as acting under a delayed opening **which means we will reassess the weather conditions at 10 a.m. to determine whether we will be able to open at a later time.** In the latter case, we ask employees to call the main phone line (301-689-7100) after 10 a.m. to get instruction on whether or not we will open.
3. We **will not** put a voicemail message on the main line with instructions until 10 a.m. when conditions have been assessed. So, first listen to the above-mentioned radio stations for your initial instructions.
4. Safety is our main concern, so even if the lab opens, but you feel that conditions are still unsafe at your home location for travel,
Do not try to travel to work!!!!

FSU's inclement weather policy is on page 30.

All of the policies of the Center for Environmental Science are available at the following web site: www.ca.umces.edu, under MyUMCES.

Key Policies to Note

Humane Treatment of Vertebrate Animals

Drug-free Workplace

Sexual Harassment

Appalachian Laboratory Graduate Student Activities, Opportunities and Responsibilities

Student Orientation

Each fall, an orientation program is available for new graduate students. During this program, procedures are reviewed for all incoming students, campus tours are given, and a welcome party for faculty and all students is given.

The University of Maryland College Park also provides an orientation for all new students at the beginning of each semester. This orientation is mandatory for foreign students and highly recommended for all students.

UMCES/MEES Graduate Colloquium

Each year students and faculty from all the campuses involved in the MEES program gather at one of the MEES labs for a Graduate Colloquium. The two-day event features student presentations and posters, faculty presentations, guest talks, and social events. The Colloquium is a good place for students to present their research in a familiar environment as well as to find out what other students in the MEES program are doing. First year students are strongly encouraged to attend this event.

Graduate Student Organization

The GSO was developed to give MEES graduate students a unified voice to express concerns to the administration, coordinate social and educational activities that would unite students from the various campuses, and provide students with guidance for successful degree completion. The GSO appoints one graduate student as a contact at each of the campuses. Your campus representative often coordinates student events locally, so it is important that he or she can reach you. Be sure you are on the email distribution list of the GSO by contacting the MEES office.

Small Student Grants

Each year the AL Graduate Education Committee makes limited money available to fund student research proposals. The goal of these awards is to fund activities or supplies that would not otherwise be available or could not be supported on the supervisor's grants. The proposals are competitively ranked and awards are typically in the range of \$500-\$2000 depending on funds available. Proposals will be evaluated on the basis of scientific merit, justification of the requested funds, and overall quality of the proposal. Announcements and deadlines are made via email by the head of the Education committee (and will eventually be posted on the AL website).

Travel Awards

Travel funds for students presenting their research (poster or talk) at conferences are available both from AL and the graduate school at College Park. Requests for submissions for AL awards and are listed with the requirements on the AL website. Information on the College Park travel awards can be found at the Jacob K. Goldhaber travel grant program website at: <http://www.gradschool.umd.edu/Fellowship/travelgrant/goldhaber/>

Teaching Assistantships

Students can obtain teaching experience at a number of locations around the area. AL offers assistantships each semester to assist with classes taught at the lab. The TA positions are awarded by the AL Graduate Education Committee and email announcements are sent out well in advance of the semester for which the class is being taught. AL students have also gained experience by teaching at College Park, Frostburg State University, and Allegany College.

AL Seminars

During the academic year speakers are invited to AL to give an hour-long seminar typically on Thursday afternoons at 3:30 PM. The titles of the seminars are posted around the lab and are advertised over email. There is usually time to meet with the seminar speaker before or after the talk and during lunch.

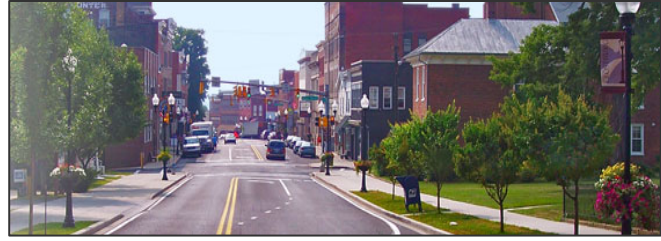
GIS Data & Training

There is a large repository of GIS data hosted by the Landscape Ecology laboratory. This includes datasets organized by thematic categories such as Elevation, Hydrography, Infrastructure, Land Cover, Political (Counties & States etc.), and Soils. The repository also includes some Landsat, Ikonos, and Hyperion imagery and some aerial photographs from Minnesota. We also have the NAIP imagery (2005) for all of Maryland. To see the spatial extent of the satellite imagery, go to <http://maps.al.umces.edu/> and follow the first link at the top of the page (The Appalachian Laboratory Image Browser). In addition to hosting a repository of data we also offer to back up your projects. If you have acquired a lot of data that you'd like to back up all at once, contact J.B. Churchill to have that done. All of the data hosted here is available for you to use for your research. If you have datasets that might be useful to others that we don't currently have in the repository, please let us know about them.

Training is typically achieved by designing your own independent study course (# of credits will depend on the design). The course typically involves taking a number of short online courses offered through ESRI's Virtual Campus. Go to ... <http://training.esri.com/> ... click the "Course Catalog" tab, and set the Options combo box to "Self-Study (Virtual Campus)" to start a search for what courses are available. We can get you any course that is "authored by ESRI" for free. See J.B. Churchill and/or Dr. Matt Fitzpatrick for more information about setting up an independent study course.

The City of Frostburg

Housing



There are two good sources for finding housing in the Frostburg area.

1. Frostburg State University Student Housing Webpage offers an excellent off-campus housing list (pdf), and a Survival Guide to Living Off-campus (pdf).
<http://www.frostburg.edu/clife/housing.htm>
2. Cumberland Times classifieds (local newspaper).
<http://www.times-news.com/classifieds/>

Frostburg Attractions

Historic Frostburg is a Maryland Main Street Community. What began as a staging stop for coaches along the National Road has grown to become a modern and diverse community. Now the National Road is our very own Main Street. Frostburg has two museums, a scenic railroad, and access to the Allegheny Highlands Trail. **The Thrasher Carriage Museum**, one of the top collections of horse drawn vehicles, represents every walk of life, located at historic Depot Center in Frostburg. Check the Thrasher Carriage Museum website at www.thrashercarriage.com/. **The Frostburg Museum** was built in 1899 as the Hill Street School. When it was no longer needed as a school, the building reverted to the County Commissioners, who gave it to the City. Check the Frostburg Museum website at <http://frostmuseum.allconet.org>.



The Frostburg Palace Theatre Inc. gained non-profit status in 1985 when a group of Frostburg community members joined together in an effort to preserve the historic building. The establishment of the film series has also addressed the need for a broader selection of films in Allegany County. The film series departs from the mainstream movie industry to show a variety of classic, independent, and foreign films, as well as documentaries. Shows are on the third Friday and Saturday of every month.

Doors open at 7:30 pm for 8:00 pm show times.
Learn more about the Palace Theater at www.frostburgpalace.org/index.htm.



The Western Maryland Scenic Railroad is a restored early 20th Century train that steams round trip through the mountains between Cumberland and Frostburg. Enjoy three centuries of transportation history, scenic excursions, and first class dining cars. Regular Scenic Excursions depart at 11:30 AM from the Western Maryland Station in Cumberland, Maryland. The train returns to the Station at approximately 3:00 PM. www.wmsr.com.



The Allegheny Highlands Trail, now nearly completed, links the Washington DC to Cumberland C&O Canal Trail with a series of hiking and biking trails in Western Maryland that connect into Pennsylvania, creating a continuous trail of 380 miles from Washington to Pittsburgh. For much more information, check out www.ahtmtrail.org.

Frostburg Area Hotels



Hampton Inn

11200 New George's Creek Rd
Frostburg, Maryland 21532
1-301-689-1998

Frostburg is conveniently located ¼ mile off Exit 34 on Interstate 68, about 2 miles from the Appalachian Laboratory. The hotel features 72 rooms, an indoor pool and whirlpool to relax in, a big screen TV in the lobby and a cardiovascular workout area to help our guests maintain their workout schedule. Amenities include wireless high-speed internet connectivity, data port access in every guest room, an On-The-House breakfast that features hot items daily and On-The-Run breakfast bags for guests with limited time.



Days Inn

11100 New George's Creek Rd
Frostburg, Maryland 21532
1-301-689-2050

The Days Inn of Frostburg is conveniently located ¼ mile off Exit 34 on Interstate 68, about 2 miles from the Appalachian Laboratory. The hotel features 91 rooms and amenities include a fitness room with sauna, guest laundry room, and complimentary continental breakfast.



Braddock Motor Inn

1268 National Highway
LaVale, MD 21502
1-301-729-3300

The Best Western Braddock Motor Inn is located in LaVale, MD, only a few miles east of Frostburg, and is located just off of Interstate 68 (exit 39 westbound and exit 40 eastbound). The hotel features 105 guest rooms, an indoor pool, sauna, exercise facility and tanning beds. There is an onsite restaurant, grille, and bar.



Victorian Rose Bed and Breakfast

193 Ord Street
Salisbury, PA 15558
1-866-245-0576
www.avictorianrosebnb.com
E-mail: victorianrose@gcnetmail.net

The Victorian Rose Bed and Breakfast is located in Salisbury, PA, 16 miles from Frostburg, just off Highway 219 N. In this 100 year-old Victorian home one will enjoy warm hospitality and a delicious home cooked breakfast.

Other Local and Regional Activities

The Appalachian Laboratory is located in the scenic mountains of western Maryland with numerous opportunities for outdoor recreation including hiking, mountain biking, skiing, snowshoeing, kayaking, rafting, and fishing. The lab is located within less than an hour's drive of many Maryland State Parks and Attractions:

- [Dan's Mountain State Park](#)
- [Deep Creek Lake State Park](#)
- [Green Ridge State Park](#)
- [New Germany State Park](#)
- [Rocky Gap State Park](#)
- [Savage River State Forest](#)
- [Swallow Falls State Park](#)
- [Youghiogheny Scenic and Wild River](#)



Additionally, the lab's location adjacent to FSU offers numerous [cultural event opportunities](#).



Other links of interest to learn more about the area:

- [Cumberland YMCA](#)
- [Country Club Mall](#)
- [AMC Theatres](#)
- [R/C Cinemas 1-2-3](#)
- [City of Cumberland, Maryland](#)
- [City of Frostburg, Maryland](#)
- [Maryland Mountainside](#)
- [Maryland Office of Tourism](#)

Local Dining Destinations

Although we are nestled away up here in the mountains, dining options in the local and surrounding areas span the globe:

- [Dining in Frostburg](#)
- [Dining in Allegany County](#)

